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ABSTRACT

Because of increasing concern about drug use in the work place and its impact on public safety, an urban mass transit agency formed a collaborative treatment link with Daytop Village to provide treatment for "impaired" transportation workers. Effective counseling approaches in the residential setting were adapted for ambulatory use and combined with urinalysis and monitoring by Daytop and the employing agency. Records of 111 randomly selected workers admitted to the program were analyzed. Of these, 57 completed the program and 54 were dismissed for lack of consistent attendance at counseling sessions or other failure to comply with requirements. Treatment effectiveness was measured by program completion, drug free status, self-concept, and psychological measures. The Tennessee Self Concept Scale (TSCS) was administered to subjects at their initial screening for the program and at completion of the program. Those subjects who completed the program reported significant self-esteem score improvements from pre- to post-test on the TSCS and reflected statistically significant pre-post improvements in scores based on empirical scales of psychopathology. Analysis of the relationship between the identified presenting drug problem and treatment outcome indicated that marijuana abusers were more likely to complete the program while heroin users were more likely to drop out. The program was effective in treating workers who abused crack and cocaine. (NB)

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OUTCOME OF DRUG ABUSE TREATMENT

AND SELF CONCEPT IMPROVEMENT

FOR

MASS TRANSIT WORKERS

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Outcome of Drug Abuse Treatment for Mass Transit Workers

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ABSTRACT

Because of the increasing concern with drug use in the work place and its impact on public safety, an urban mass transit agency formed a collaborative treatment link with Daytop Village to provide treatment for "impaired" transportation workers. Effective counseling approaches in the residential setting were adapted for ambulatory use and combined with urinalysis and monitoring by Daytop and the employing agency. 705 workers were treated and returned to their job.

In 1985, research using NIDA standards showed that the residential Therapeutic Community model used at Daytop resulted in 85% of admitted patients' being drug free and employed after completing 14-24 months of residential treatment. Longitudinal testing with the Tennessee Self Concept Scale (TSCS) were also used to demonstrate that the pathology underlying the drug used has been relieved, i.e., cognitive changes had occured which supported the new behaviors.

In admitting the transit workers, Daytop became engaged with a very dissimilar group of individuals. These individuals have less pathology, better social functioning, are employed, and seek treatment under a strict recovery deadline: failure to complete in 12 months or remain drug free after treatment results in loss of job. The success rate is similar: 80% of those who have completed treatment have been found to be drug free at follow-up. Pre-test and Post-test TSCS scores for a random sample of 57 of the 705 patients is fully analyzed to exhibit the nature and magnitude of the changes which took place during treatment.

WORKPLACE POLICY AND DAYTOP ECS TREATMENT PROGRAM

During the years 1986 through 1989 Daytop Village Employee Counseling Service (ECS) admitted more than 1,293 transit workers into the outpatient program under a special arrangement with a major urban transit authority. The agreement required that the workers complete treatment within 12 months unless the substance they abused was Marijuana, in which case the treatment must terminate within six months. When treatment requirements were fully met, the worker was restored to his/her previous position; any subsequent positive urine would result in immediate dismissal. Workers failing to comply with treatment requirements were to be discharged, with employment consequences, including possible dismissal, to be determined within the transit authority.

The agreement between Daytop and the transit authority did not preclude voluntary admissions, but when an employee chose to participate voluntarily, the same time constraints applied. Those admitted involuntarily were workers presenting positive urine screenings at testing for job readiness, at testings following accidents, at the time of annual physical examinations or return-to-work physical examinations after a 21 day absence due to illness.

The initial Daytop screening at ECS of referred workers was conducted during the first few sessions, and included urine testing, health and treatment histories, and administration of the Tennessee Self Concept Scale (TSCS). The urine testings were repeated randomly at least three times monthly during treatment, and were required of some workers at each session. Administration of the TSCS was repeated immediately upon completion of the program.

PROGRAM DESCRIPTION

Daytop's ECS was contracted by the urban mass transit agency's EAP to provide drug treatment services. An active collaborative clinical model between the ECS and EAP distinguishes this treatment program.

The treatment program is an ambulatory modality based on the principles of the residential Daytop Therapeutic Community (T.C.) Program. The program requires the referred employee/client to participate in one individual and one group counseling session each week. The program emphasizes active participation and includes individual and group counseling sessions, behavior accountability, constructive confrontation and support, attitudinal review, education, feedback on progress to client and employer, and random urinalysis. Some clients are also encouraged to attend outside self-help support groups such as A.A. and N.A. The goal of the six to

12 month treatment model for the client was to achieve abstinence. Social drinking of alcohol was permitted for some clients if it did not pose a relapse risk. The staff is comprised of senior drug counselors, who have an average of five years drug treatment experience. The counselors work in conjunction with accredited mental health staff and a consulting psychiatrist, who are all experienced in substance abuse treatment. The ECS program appeals to the healthier ego components of the referred employee by confronting his denial, it stresses ego approval by staff and peers and reinforces abstinence and drug free behavior in the workplace.

SUBJECTS

This study was initiated by the senior author to assess the effectiveness of the program and discover the patterns among participants which might provide useful information for program modification. The records of 111 randomly selected workers admitted were analyzed. Of these 111 workers, 57 completed the program and the remaining 54 were dismissed for lack of consistent attendance at counseling sessions or other failure to comply with requirements. The mean age in this sample was 36.5 years, with the actual ages ranging from 22 to 59. Seventy Four percent (74%) (82) of the subjects were black, 17% (19) were white, 7% (8) were Hispanic, the balance listed as other. Twenty Five percent (25%) of the subjects were married, 33% never married, and the remaining widowed, divorced or separated. The 111 worker/clients have been with

the transit authority an average of 6.7 years, with employment ranging from one to 22 years. Fifty Five percent (55%) of all the referred workers were employed in operating titles. Fifty Six percent (56%) were mandated to Daytop's ECS Program. It should be noted that the similarity is coincidental; thirty five of those in operating titles were among those attending involuntarily.

The transit workers referred for treatment had, as noted, been found positive for controlled substances on urine testing or had admitted to abusing drugs. For some subjects, a single substance was involved; for others, multiple positive results were obtained. For the 111 subjects, the percentage using each substance or combinations of substances is displayed in Figure 1. The predominant primary drug problem was Cocaine/Crack.

ANALYSES

ECS Treatment effectiveness was measured by program completion, drug free status, self-concept and psychological measurements. The principal analysis consisted in a comparison of TSCS subscale (self-concept and psychopathology) scores obtained at the initial screening (pre-test) to the TSCS scores at completion (post-test). Only initial screening (pre-test) TSCS scores were obtained for those who are dismissed from drug treatment for non-compliance. Correlated

t-tests were used to compare the subscales of interest, and significant differences were attributed to the program treatment. The basis for this inference was the known sensitivity of the selected TSCS subscales to the effects of Daytop treatment, as had been demonstrated on therapeutic community residents.

Ancillary analyses were performed to determine whether program completers differed systematically from those who were dismissed and whether any personological variables served as indicators of probable program completion. The interest in program completion is not based upon any supposed linkage between length of time in treatment and the workers ultimate ability to remain drug free afterward, since no such relationship has been found to exist. The interest in completion is based on the prior findings that 80% of those completing the Daytop treatment have remained drug free fully five years afterward. Because of this finding, program completion becomes an accessible operational definition of treatment success. In point of fact, it is not the only indicator of success, since the strengthening of the self-concept perceptions measured by the TSCS provide a view of the change in mental health which will reduce the probability of the employee's future drug abuse in the workplace.

Program completion provides a ready and visible goal for patients and therapists alike on a day-to-day basis. Independent t-tests were used to compare completers to those dismissed, and multiple regression techniques were employed to discover variables which contributed significantly and independently to improvement in self-concept and program completion.

RESULTS AND FINDINGS

The analyses are based on data from a random sample of the 57 program completions and 51 employee clients who were dismissed for non-compliance.

The results of the analysis has generated new treatment data which supports this form of ambulatory drug treatment for more than half of the referred transit workers. These findings also address the gains in self-esteem of employees who completed the program; comparisons of employees characteristics who were dismissed from the program for non-compliance; comparisons of self-concept profiles; comparisons between mandated and employees who volunteered for treatment; and comparisons between employees in operating and non-operating titles. Operating titles include job categories as Subway Motorman, Conductors, Signalman, Technical Repair Personnel, and Bus Drivers. Examples of non-operating titles include such titles as Track Repairman, Token Booth Clerks and

Car Cleaners. A preliminary analysis determined that the 705 "program completions" represented 55% of all 1,293 referred impaired employees since the program began (Fig. 5).

The randomly established sample group of 57 program completions (see Fig. 2) reported significant self-esteem score changes from a pre-test average TSCS score of 347 to post-test average score 360 (p - .001). The attribution of the variance was allocated to volunteers (13%) and operating titles (9%). These two components explained the greater portion of the variability. Thus, those employees who self referred voluntarily for drug treatment and who were in operating titles had greatest self concept gains.

Those transit workers who completed the program (see Fig. 3) also reflected statistically significant pre-post improvements in scores based on empirical scales of psychopathology (DP - Defensive Positive); (GM - General Maladjustment); (PD - Personality Disorder); (N - Neuroticism). These are all inverse scales designated in Fig. 3 as (R), thus the higher scores represent reduced psychopathology and improvement on these scales. There was a significant pre-post gain in Personality Integration which is a measure of self-concept integration. This scale is based on a sample of people who were judged to be above average in mental health status and integration of the different aspect of self-concept. Approximately 3% of all referred drug using employees required

ECS formal psychiatric evaluation because of significant clinical signs.

Although the mandated and the volunteer for treatment employees produced similar TSCS profiles at admission, the mandated group changed significantly far less in their self-concept, reduction in psychopathology and personality integration scores. Also, those employees who were mandated to treatment by the transit agency did not ensure or predict that the employee would complete the ECS program. Urinalysis data (Fig. 4) for the sample of 57 program completions shows that 24 mandated clients had positive urine screens during treatment compared to eight with no positive urine screens. This pattern is distinctly different for the volunteer group which had an equivalent ratio of clients with positive (n = 13) and negative (n = 12) urine screens during their treatment. These results suggest the response and outcomes to treatment favor the employee who volunteers for drug treatment as a result of acknowledging his drug abuse problem. While these workers may seek treatment to ensure his/her job, this action implies a significantly different level of motivation, readiness for and compliance with the ECS Treatment Program. EAP and transit workplace policy require mandating identified employees for treatment. These results suggest that additional pre-treatment strategies may be required to improve program compliance for this group before they begin in the Daytop ECS Program. Mandated employees would benefit by

developing a greater cognitive awareness and acceptance of the fact that their drug abuse problem is linked to reduced job performance and is an increased risk to self and other employees in the workplace. Disseminating drug education and emphasizing the positive benefits of treatment can do much to encourage the impaired employees to volunteer for treatment.

Analysis of the relationship between the identified presenting drug problem and treatment outcome indicated that Marijuana abusers are more likely to complete the program while Heroin users are more likely not to complete. The Daytop ECS Program demonstrated its effectiveness in treating workers who abused Crack and Cocaine. As noted 65% of the employees were referred because of these drugs. Many of these employees were also abusing alcohol.

One can reasonably infer that the combined benefit of drug free status and improved self-concept and reduced measures of psychopathology resulting from program completion provides the transit agency with a much improved employee. This data suggests the relative effectiveness of the Daytop ECS/EAP Ambulatory Program Model. The program provides a longer period for the impaired employee to learn and practice being drug free in contrast to shorter term residential interventions. The average time for program completion was seven months (twenty eight weeks). Some of these employees returned to work during this period after a complete evaluation of their progress and drug free status.

The goals of our future research is to conduct longer term follow-up studies at the workplace to determine drug free status and job performance.

The model of the EAP/ECS Program clearly implies a positive ambulatory approach for similar work forces in the areas of transportation and public safety.

REFERENCES

Biase, D. V., Return to Work Issues, Bulletin of the New York Academy of Medicine
Vol. 65, No. 2, 208-214, 1989

Biase, D. V., Daytop Miniversity - A Multi-year Therapeutic Community Treatment Research Project. Final report to the National Institute on Drug Abuse
No. R-18-DA-03382

Branson, P., Personal Communication
January 1988

Fitts, W., The Self Concept and Psychopathology Monograph IV, Counselor Recordings and Tests, Nashville, Tenn. 1972

Wheeler, B., Biase, D. V., and Sullivan. A. P., Changes in Self Concept During Therapeutic Community Treatment: A Comparison of Male and Female Drug Abusers. J. of Drug Education, Vol. 16 (2) 1986

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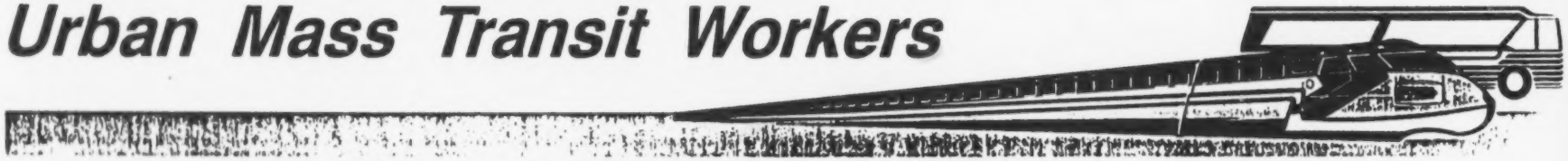
Profile of EAP Referred Urban Mass Transit Workers

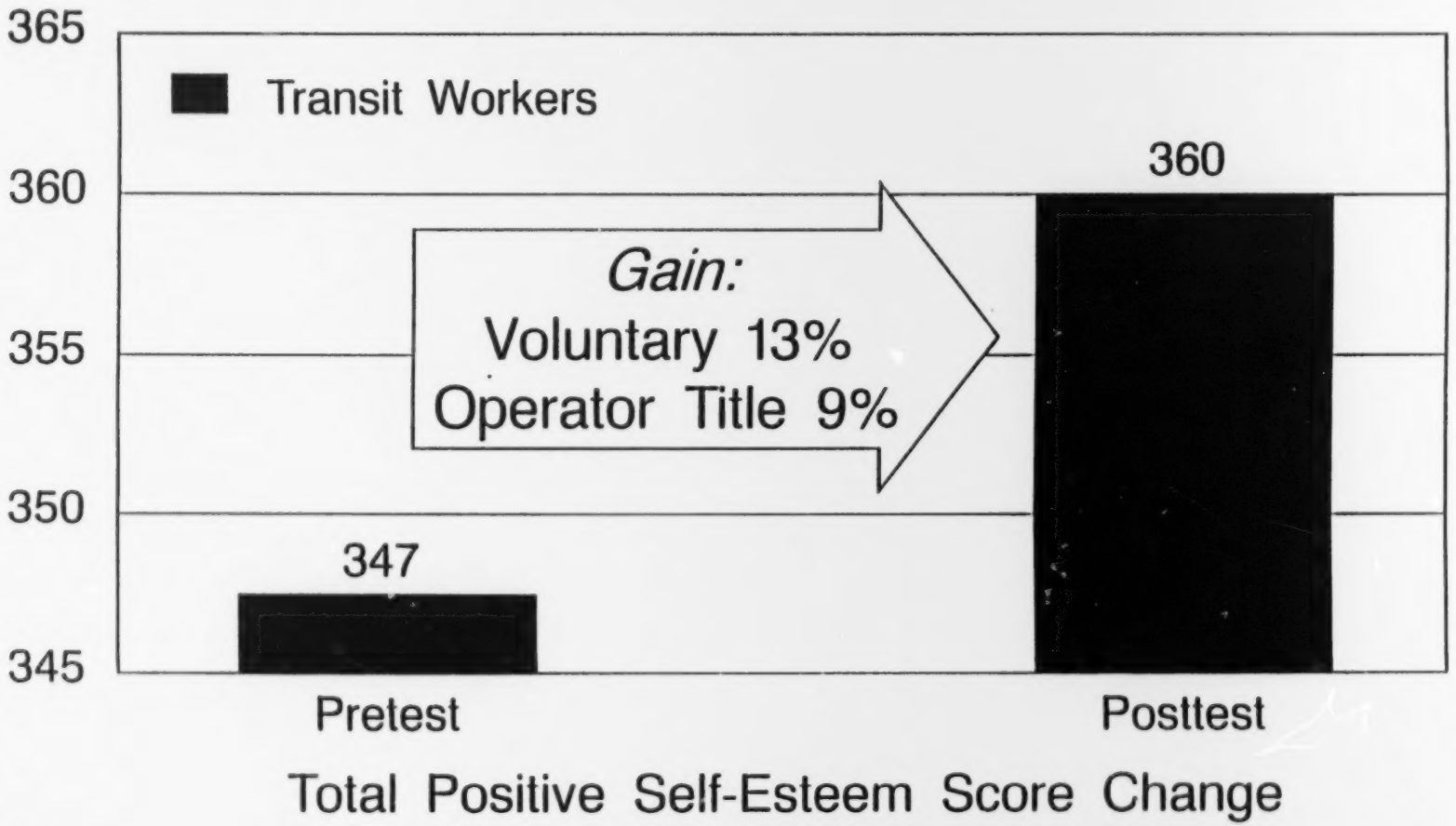


(Substance Abuse/Chemical Dependency)

Age	37 Years	
Race/Eth	Black	74%
	White	17%
	Hispanic	7%
	Other	2%
Marital Status	Never Married	33%
	Sep/Div/Widow	40%
	Married	25%
	No Resp.	2%
Gender Ratio Male/Female		9/1
Yrs w/Transit	Avg. 6.7 Yrs.	
Range	1 - 22 Yrs.	
Primary Problem Drugs	Cocaine/Crack	65%
	Marijuana	35%
	Heroin	15%
	Alcohol	14%

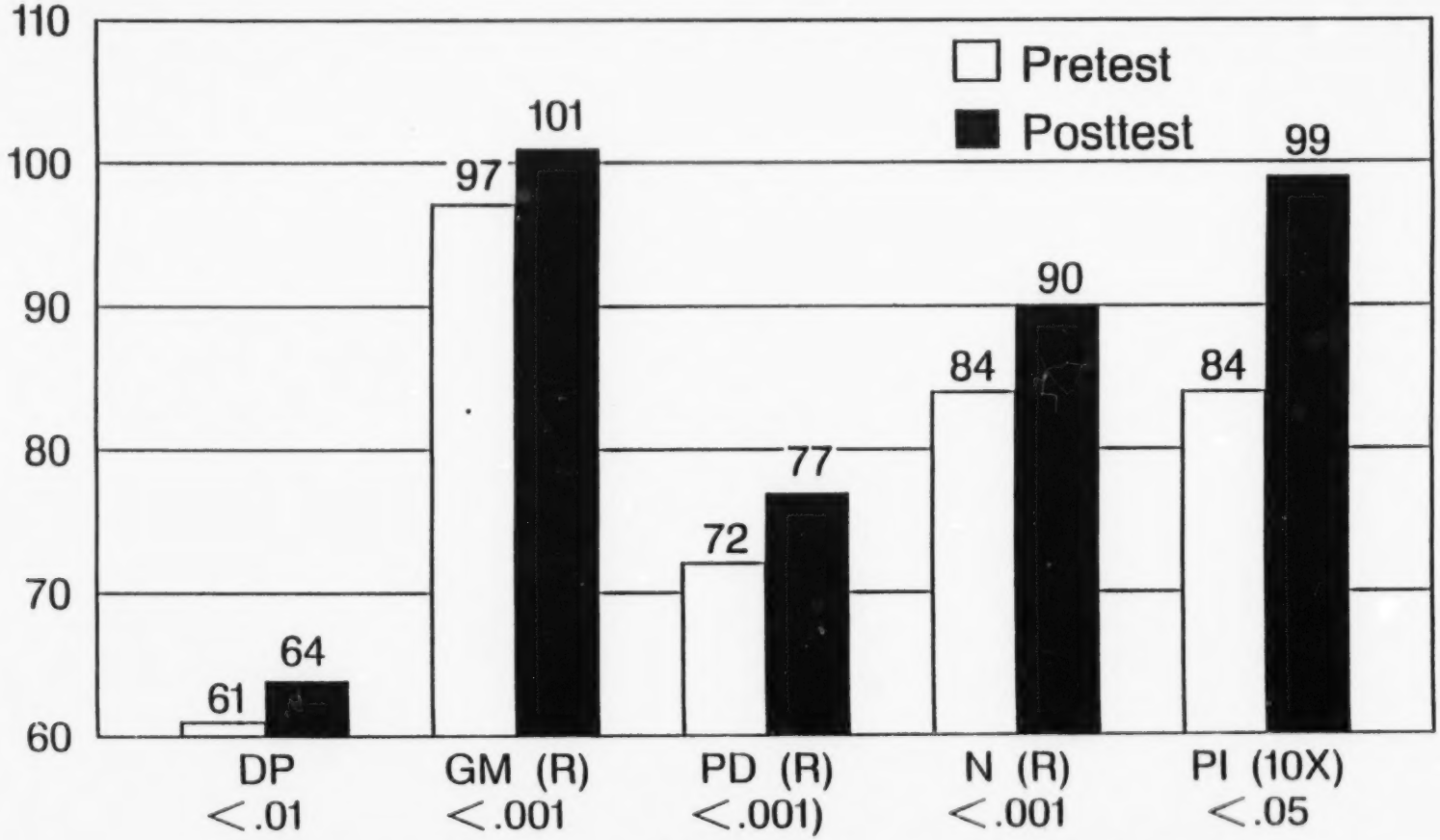
(Figure 1)

Mass Transit Workers Program Completions



(Figure 2)

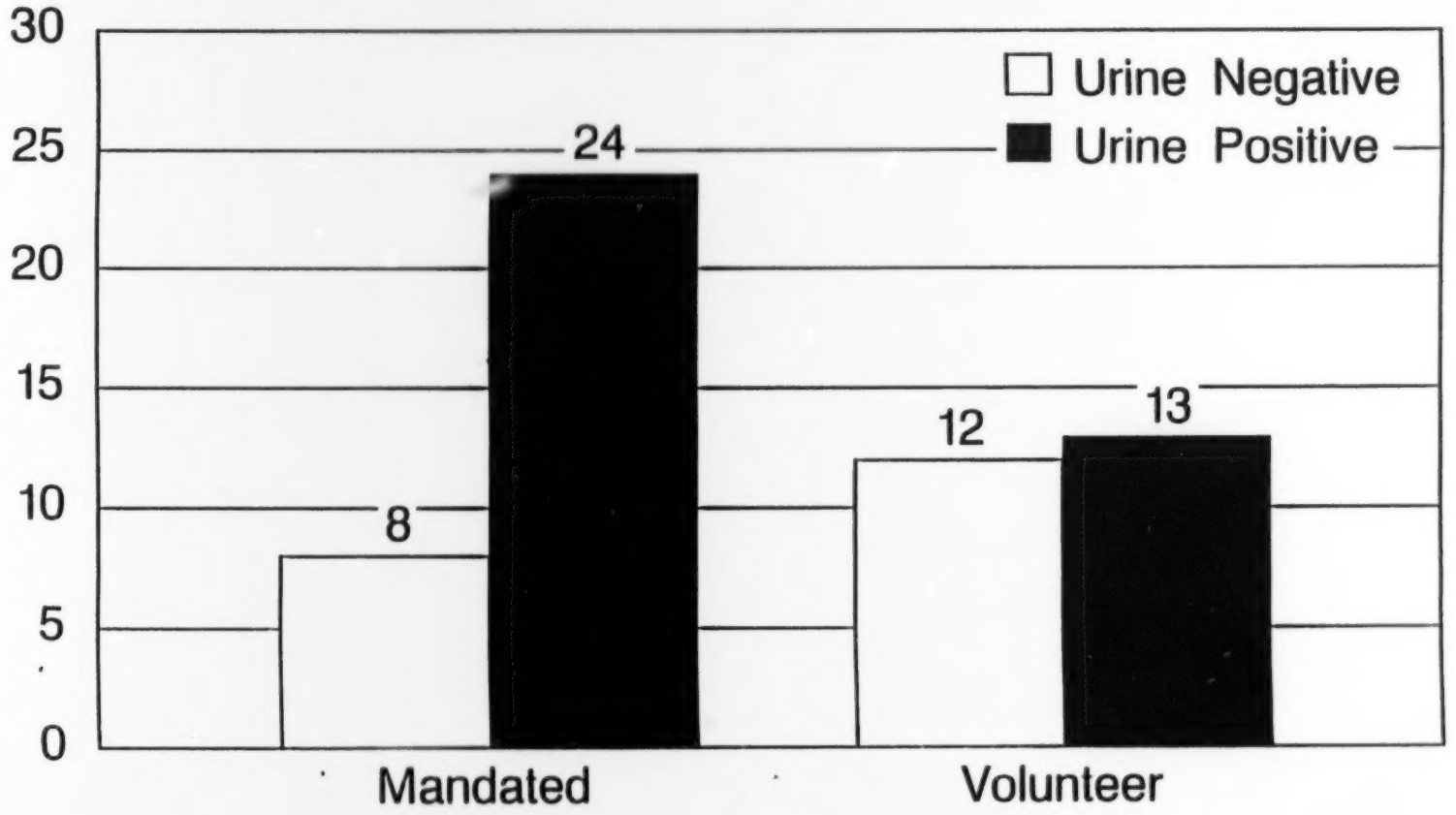
Change in Indicators of Underlying Pathology



Empirical Scale Changes – Completers

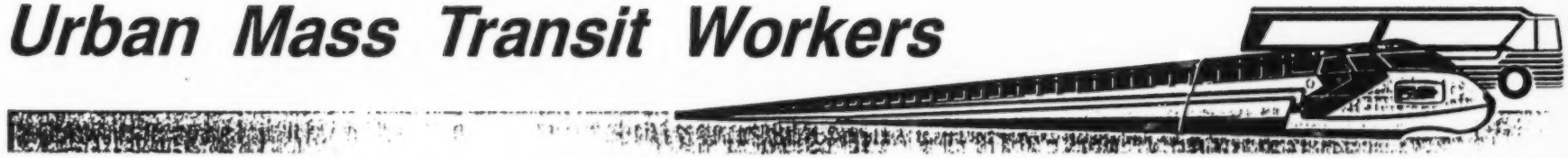
(Figure 3)

Urine Monitoring Results of Mandated and Volunteer Mass Transit Workers



(Figure 4)

Urban Mass Transit Workers



	EAP Referred n = 1293	Program Completion n = 705	Dismissed n = 588
Operating Title	56%	46%	69%
Non-operating Title	44%	54%	31%

(Figure 5)